BIAMP®

SPM412e
Stereo Preamp/Mixer

Operation Manual

Biamp Systems, 10074 S.W. Arctic Drive, Beaverton, Oregon 97005 U.S.A. (503) 641-7287 www.biamp.com

TABLE OF CONTENTS

Front Panel Features	pg. 2
Rear Panel Features	pg. 3
Modifications	pg. 4 & 5
Remote Control	pg. 6 & 7
Applications	pgs. 8 & 9
Block Diagram	pg. 10
Specifications	pg. 11
Warranty	

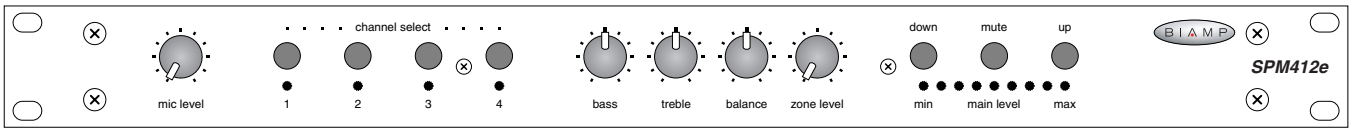
INTRODUCTION

The **SPM412e** Stereo Preamp/Mixer provides four stereo line inputs, one mic/line input, and two independent outputs. With input source selection, automatic page-over muting, and remote control functions, the SPM412e is ideally suited for applications such as restaurants, bars, meeting rooms, aerobics studios, and school gymnasiums. The SPM412e is extremely versatile, yet cost-effective, and is easy to install and operate.

SPM412e features include:

- four stereo line inputs with trim controls & RCA connectors
- balanced mic/line input on plug-in barrier strip connector
- trim, pad, peak indicator, & level control on the mic/line input
- +24 volt phantom power switchable on the mic/line input
- balanced stereo main output on plug-in barrier strip connector
- balanced mono zone output on plug-in barrier strip connector
- front panel push-buttons select stereo inputs & adjust main level
- simultaneous selection of multiple stereo inputs from front panel
- front panel display shows stereo input selections & main level
- treble, bass, and balance controls for the stereo main output
- rear panel switch defeats treble & bass at stereo main output
- rear panel switch converts the stereo main output to mono
- limiter with threshold control for the stereo main output
- front panel rotary level control for the mono zone output
- automatic talkover muting when the mic/line input is in use
- internal jumpers assign mic/line input pre or post treble & bass
- internal jumpers assign mic/line input pre or post main level
- internal jumpers assign mic/line input to main and/or zone
- internal jumpers assign stereo line inputs to main and/or zone
- internal jumpers assign talkover muting to main and/or zone
- separate internal talkover mute adjustments for main and zone
- infrared, wall-mount, custom, or third-party remote controllers
- wall-mount 'Controller' overrides commands from front panel
- remote control affects stereo input selection & main level
- default settings can be defined & stored for recall at power-up
- incorporates **AES** recommended grounding practices
- CE marked and **UL** / **C-UL** listed power source
- covered by Biamp Systems' five-year warranty

FRONT PANEL FEATURES



(1) Mic Level: This rotary control adjusts the level of the Mic Input signal sent to the Main Output and Zone Output sections. *Mic Input signal can be assigned to the Main and/or Zone Outputs individually, plus it can be assigned to the Main Output as pre/post Tone and pre/post Main Level (see Modifications on pgs. 4 & 5).*

(2) Channel Select: These four momentary push-buttons select which Stereo Line Input signal is sent to the Main Output and Zone Output sections (see Stereo Input Assign on pg. 4). To select a desired Stereo Line Input, press the corresponding push-button. The adjacent LED indicator will light, indicating the selection. *More than one Stereo Line Input can be selected at a time by pressing the corresponding front panel push-buttons simultaneously. Whenever power to the SPM412e is turned off or interrupted, Channel Select settings are retained in non-volatile memory for recall when power is turned back on. However, default settings can be defined and stored for recall at power-up (see Power Switch below).* **NOTE:** See Remote Control on page 6.

(3) Bass: This rotary control adjusts the low-frequency (Bass) content of the Main Output signals. When this control is centered (12 o'clock), Bass is normal (flat). When turned counter-clockwise, Bass is decreased (-12dB @ 200Hz max.). When turned clockwise, Bass is increased (+12dB @ 200Hz max.). *A rear panel switch allows the Bass & Treble controls to be bypassed (see Tone on pg. 3).*

(4) Treble: This rotary control adjusts the high-frequency (Treble) content of the Main Output signals. When this control is centered (12 o'clock), Treble is normal (flat). When turned counter-clockwise, Treble is decreased (-12dB @ 5kHz max.). When turned clockwise, Treble is increased (+12dB @ 5kHz max.). *A rear panel switch allows the Bass & Treble controls to be bypassed (see Tone on pg. 3).*

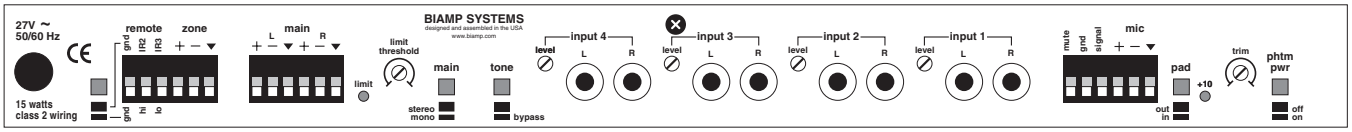
(5) Balance: This rotary control adjusts the stereo balance of the Main Output signals. When this control is centered (12 o'clock), left and right signal levels are equal. When turned counter-clockwise, left signal level increases and right signal level decreases. When turned clockwise, right signal level increases and left signal level decreases. *Use the Balance control to compensate for uneven speaker coverage.*

(6) Zone Level: This rotary control adjusts the overall level of signals sent to the Zone Output (see Zone Output on pg. 3).

(7) Main Level: These three momentary push-buttons adjust the overall level of signals sent to the Main Output (see Main Output on pg. 3). The Down push-button decreases level and the Up push-button increases level. As long as either push-button is being pressed, signal level will continue to change until the minimum or maximum level has been reached. It takes approximately five seconds to adjust from one extreme to the other. When the Mute push-button is pressed, the output is muted (turned off). Pressing the Mute push-button again will gradually un-mute the output. *Pressing the Up push-button (while the output is muted) will immediately un-mute the output and begin increasing the level. However, Pressing the Down push-button (while the output is muted) will cause there to be a decreased level when the output is un-muted. Whenever power to the SPM412e is turned off or interrupted, Main Level settings (except Mute) are retained in non-volatile memory for recall when power is turned back on. However, a default level setting can be defined and stored for recall at power-up (see Power Switch below).* The 9-segment LED display indicates the relative level setting for the Main Output. The display is not a signal level meter. The output has approximately 10dB of gain at 'max', 70dB of attenuation at 'min', and 0dB of gain (unity) when seven of the nine LEDs are lit. When Main Output is muted, only the 'min' LED will be lit. When Main Output is un-muted, the display will return to the current level setting. *Pressing the Down button (while the output is muted) will cause there to be a decreased level when the output is un-muted, however, the display will remain at 'min' until the output is actually un-muted.* **NOTE:** See Remote Control on page 6.

NOTE: *Whenever power to the SPM412e is removed or interrupted, Channel Select & Main Level settings (except Mute) are retained in non-volatile memory for recall when power is restored. Default Channel Select and Main Level settings can be defined & stored for recall at power-up. To define & store default settings: 1) Select the default Stereo Line Input(s). 2) Adjust Main Level to the default setting. 3) Allow 3 seconds of inactivity (settings are stored in non-volatile memory). 4) Turn unit off (un-plug from AC power). 5) Press and hold the Mute push-button while restoring power. 6) Release the Mute push-button. 7) Cycle power off & on again (confirms the default power-up settings are stored). These Channel Select & Main Level settings are now stored in non-volatile memory, and will be recalled whenever power to the SPM412e is turned off & on (interrupted).* ***NOTE:*** *This process can be reversed (so the SPM412e will again recall the most recent settings at power up) by repeating steps 4~7.*

REAR PANEL FEATURES



(1) Power Cord: The external transformer provides 27 Volts AC to the SPM412e, and is detachable via a 5-pin DIN connector. Two internal 'self-resetting' fuses provide AC over-current fault protection (not user servicable). These fuses will attempt to re-set when power is turned off. If these fuses do not re-set, or continue to trip, it is an indication that the SPM412e requires service.

(2) Remote: When the adjacent switch is released, the 'IR2', 'IR3', & 'gnd' terminals can be used for connection of optional remote controls (see Remote Control on pg. 6). When the adjacent switch is depressed, the 'hi', 'lo' & 'gnd' terminals can be used as a 'Translator' input for remote control via third-party controllers which utilize a carrier-stripped serial bit-stream (see Translator on pg. 7).

(3) Zone Output: This balanced output carries a mono sum of the selected Stereo Line Input signal, and the Mic/Line Input signal (see Modifications on pg. 4). Zone Output provides 6dB of additional gain when balanced. For unbalanced use, connect signal to (+) and ground to (▼), leaving (-) unconnected. When Mic/Line Input signal is present, stereo input signal may be muted automatically by up to 40dB (see Mic/Line Input on this page).

(4) Main Output: This balanced stereo output carries the selected Stereo Line Input signal, and the Mic/Line Input signal (see Modifications on pg. 4 & 5). Main Output provides 6dB of additional gain when balanced. For unbalanced use, connect signal to (+) and ground to (▼), leaving (-) unconnected. When Mic/Line Input signal is present, stereo input signal may be muted automatically by up to 40dB (see Mic/Line Input on this page).

(5) Limit Threshold: This screwdriver adjustable control sets the threshold level for the internal limiter. When Main Output signal levels exceed this threshold, the limiter is activated and the adjacent Limit indicator will light. Limit Threshold range is -4dBu to +24dBu (balanced) or -10dBu to +18dBu (unbalanced). *Use the limiter to set maximum levels for sound system protection.*

(6) Main (Stereo / Mono): When depressed, this switch combines the stereo left & right Main Output signals into a mono sum, which is then sent to both left & right Main Outputs. *When Main Output is set for mono operation, the front panel Balance control still affects the relative level of the left & right Main Outputs.*

(7) Tone (Bypass): When depressed, this switch bypasses the front panel Bass & Treble controls. Tone Bypass defeats any tone adjustments made to the Main Output signals.

(8) Inputs 1~4: These RCA connectors provide the unbalanced Stereo Line Inputs for line-level signals (-10dBu or +4dBu). *Use these inputs to accept signals from cassette, CD, VCR, tuner, satellite, cable, computer, etc.* Inputs 1~4 each have a screwdriver adjustable control for setting level of the corresponding Stereo Line Input signal. *Use these controls to compensate for different input signal levels. For best performance, reduce level only on inputs which are higher than the others. These controls are factory set fully clockwise for +10dB of gain. This is appropriate for most inputs such as CD, cassette, tuner, etc. (-10dBu nominal levels).*

(9) Mic / Line Input: This balanced input will accept either low-impedance microphone or line-level input signals. For unbalanced use, connect signal to (+) and ground to both (▼) & (-). Three additional terminals are provided for 'page-over' muting of the Stereo Line Input signals. By wiring 'signal present' to 'mute', automatic muting of the currently selected Stereo Line Input will occur whenever signal is present at the Mic/Line Input. Manual muting of the currently selected Stereo Line Input is achieved by wiring a switch or contact-closure between 'mute' and the adjacent 'gnd' terminal. From the factory, 'page-over' muting is set for -40dB, and is assigned to both the Main Output and the Zone Output (see Mute Assign & Mute Adjust on pg. 4).

(10) Pad: When depressed, this switch reduces the Mic/Line Input signal level by 30dB (see Mic/Line Input above). *Use this switch when Mic/Line Input signal levels exceed the normal operating range of the Trim control, or whenever a line-level input signal is connected.*

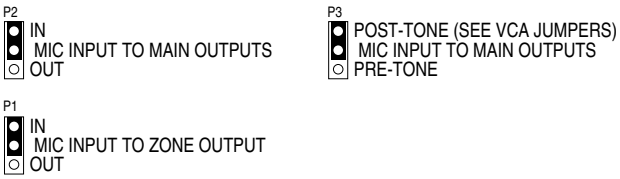
(11) Trim: This screwdriver adjustable control sets gain at the Mic/Line Input (see Mic/Line Input above). *Use this control to compensate for different input signal levels. For best performance, adjust Trim so the adjacent +10 indicator flashes only on occasional peaks in signal level.*

(12) Phantom Power: When depressed, this switch provides +24 Volt Phantom Power to the Mic/Line Input (see Mic/Line Input above). Phantom Power is for powering condenser microphones. ***CAUTION:*** *Never turn Phantom Power on when line-level signal devices are connected to the Mic/Line Input. Always turn power off and Mic Level down before switching Phantom Power or making connections to the Mic/Line Input.*

MODIFICATIONS

To access internal modifications, first disconnect power to the unit. Then lay the unit on a flat surface with the front panel facing forward and the top panel facing up. Remove the top panel (eight screws along the sides and rear; one screw centered behind the front panel). Modifications are at the center of the circuit board, starting from the left side (see diagrams below). Modifications require no soldering.

MIC/LINE ASSIGN: Internal jumpers are provided to assign Mic/Line Input signal to the Main Output and the Zone Output, independently. From the factory, Mic/Line Input signal is assigned to both the Main Output and the Zone Output. To un-assign Mic/Line Input signal from the Main Output, move jumper **P2** ('MIC INPUT TO MAIN OUTPUT') forward one pin to the 'OUT' position, using needle-nose pliers. To un-assign Mic/Line Input signal from the Zone Output, move jumper **P1** ('MIC INPUT TO ZONE OUTPUT') forward one pin to the 'OUT' position. If desired, Mic/Line Input signal may be un-assigned from both outputs. A jumper is also provided to assign Mic/Line Input signal to the Main Output pre or post tone (Treble & Bass). From the factory, Mic/Line Input signal is assigned post-tone (not affected by Treble & Bass). To assign Mic/Line Input signal pre-tone (affected by Treble & Bass), move jumper **P3** ('MIC INPUT TO MAIN OUTPUTS') forward one pin to the 'PRE-TONE' position, using needle-nose pliers. See also Mic Pre/Post VCA on page 5.

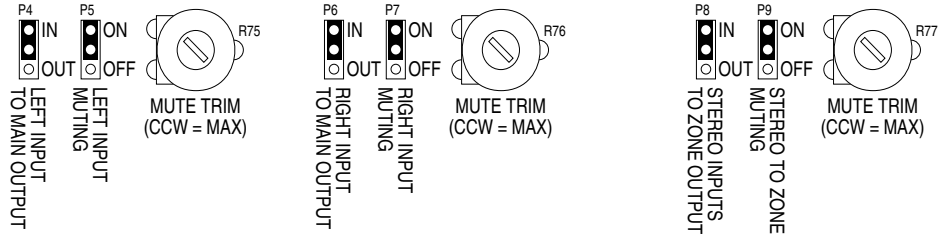


STEREO INPUT ASSIGN: Internal jumpers are provided to assign Stereo Line Input signals to the Main Output and the Zone Output, independently. From the factory, Stereo Line Input signal is assigned to both the Main Output and the Zone Output. To un-assign Stereo Line Input signal from the Main Output, move jumpers **P4** & **P6** ('LEFT INPUT TO MAIN OUTPUT' & 'RIGHT INPUT TO MAIN OUTPUT') forward one pin to the 'OUT' position, using needle-nose pliers. If desired, left & right Stereo Line Input signals may be un-assigned from the Main Output independently. To un-assign Stereo Line Input signal from the Zone Output, move jumper **P8** ('STEREO INPUTS TO ZONE OUTPUT') forward one pin to the 'OUT' position, using needle-nose pliers.

MUTE ASSIGN: Internal jumpers are provided to assign muting of Stereo Line Input signals at the Main Output and the Zone Output, independently. From the factory, muting is assigned to both the Main Output and the Zone Output. To un-assign muting from the Main Output, move jumpers **P5** & **P7** ('LEFT INPUT MUTING' & 'RIGHT INPUT MUTING') forward one pin to the 'OFF' position, using needle-nose pliers. If desired, muting may be un-assigned from left & right Main Outputs independently. To un-assign muting from the Zone Output, move jumper **P9** ('STEREO TO ZONE MUTING') forward one pin to the 'OFF' position, using needle-nose pliers. If desired, muting may be un-assigned from both the Main Output and the Zone Output.

NOTE: Mic/Line Assign, Stereo Input Assign, and Mute Assign are totally independent of each other. Therefore, Mic/Line Input signal may be un-assigned from either output, without un-assigning the muting function from that output. Likewise, the muting function may be un-assigned from either output, without un-assigning Mic/Line Input signal from that output. *To un-assign both Mic/Line Input signal and the muting function from a given output, both jumpers must be moved.* Also, Mic/Line Input signal may be un-assigned from the Main Output and Stereo Line Input signal may be un-assigned from the Zone Output, creating separate outputs for Stereo Line Input and mono Mic/Line Input signals. This is useful when separate high-fidelity (music) and distributed (speech) speaker systems are desired.

MUTE ADJUST: Internal screwdriver adjustable controls are provided to adjust the amount of muting applied to Stereo Line Input signals. From the factory, -40dB of muting is set for Stereo Line Input signals. To decrease the amount of muting at the Main Output, adjust controls **R75** & **R76** ('MUTE TRIM') clockwise. To decrease the amount of muting at the Zone Output, adjust control **R77** ('MUTE TRIM') clockwise. These controls are totally independent. Therefore, different amounts of muting may be set for each output. However, muting is usually set the same for left & right Main Outputs. The muting range is adjustable from -40dB (max.) to -4dB (min.).



MODIFICATIONS

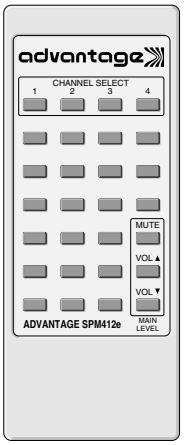
MIC PRE/POST VCA: Internal jumpers are provided to assign Mic/Line Input signal to the Main Output pre or post VCA (Main Level). From the factory, Mic/Line Input signal is assigned pre-VCA (affected by Main Level). To assign Mic/Line Input signal post-VCA (not affected by Main Level), move jumpers **P10** & **P11** ('L' & 'R') backward one pin to the 'POST' position, using needle-nose pliers. These jumpers are totally independent of each other. Therefore, Mic/Line Input signal may be assigned pre or post VCA for left & right Main Outputs independently.. However, this assignment is usually the same for both left & right Main Outputs. ***CAUTION:*** *When assigned Post-VCA, Mic/Line Input signal can trigger, but will not be affected by, the internal limiter circuit. Mic/Line Input signal cannot be assigned Post-VCA unless it is also assigned Post-Tone.*

MICROPHONE POST TONE CONFIG JUMPERS (P10,P11):
CONFIGURE THESE JUMPERS FOR LEFT AND RIGHT
OUTPUTS WHENEVER MIC IS SELECTED POST-TONE.
OPTIONS ARE POST AND PRE OUTPUT LEVEL CONTROL

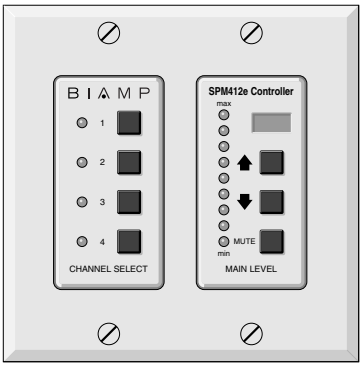
REMOTE CONTROL

Infrared and wall-mount remote control is optional for the SPM412e. Remote control affects Channel Select and Main Level (plus mute). Remote control may be added at any time, and does not require the SPM412e to be modified, opened, or removed from a rack. There are two remote control devices: a hand-held Infrared Transmitter and a wall-mount push-button Controller with status indicators & infrared detector (see diagrams below). Remote control of the SPM412e is also possible via third-party controllers, which utilize a carrier-stripped serial bit-stream (see Translator on next page).

Infrared Transmitter: The Transmitter is a hand-held controller, which transmits infrared codes unique to Biamp. Therefore, the Transmitter should not affect any other infrared controlled equipment (such as TVs or VCRs). Likewise, other infrared controllers will not provide proper control of Biamp equipment. The Transmitter requires two AAA batteries, which are included with the unit (user installed). The Transmitter has twenty-eight buttons, only seven of which control functions on the SPM412e. Channel Select buttons provide the same function as those on the SPM412e front panel (except that only one stereo line input can be selected at a time). When a stereo line input is selected with the Transmitter, the associated LED indicator on the SPM412e front panel will light. Main Level buttons provide the same function as Main Level buttons on the SPM412e. For best results, there should be an unobstructed line-of-sight from Transmitter to Receiver. The Transmitter will operate up to 30 feet from a Controller panel. When infrared information is transmitted to the Receiver, the LED indicator inside the Receiver will light. **NOTE:** The Infrared Transmitter requires an Infrared Receiver (or Controller) to allow infrared control.



Controller: The Controller is a 'hard-wired' control, which is powered by the SPM412e. There are no batteries to wear out, and it is not easily lost or stolen. The Controller may be wired up to 2000 feet from the SPM412e, using 2-conductor shielded cable (not included). The Controller overrides all similar commands which might be initiated from the front panel of the SPM412e (see NOTE below). To install Controller, first remove mounting box from circuit board & front panel. Route cable through "knock-out" hole on rear of mounting box. Install mounting box in wall or panel. Three screw terminals on circuit board ('GND', 'IR2', & 'IR3') correspond to 'Remote' terminals on rear panel of SPM412e. Connect cable shield to 'GND' terminals at each end. Use conductors to connect 'IR2' to 'IR2' & 'IR3' to 'IR3'. Install circuit board & front panel on mounting box. The Controller has seven buttons which control functions on the SPM412e. The Channel Select buttons & indicators provide the same functions as those on the SPM412e front panel (including the ability to select more than one stereo line input at a time). The Main Level buttons & display provide the same functions as Main Level on the SPM412e front panel (except that only a single indicator will light to display the level setting, and it will dim when the output is muted). The Controller also includes an infrared detector, which allows it to operate as an Infrared Receiver as well. **NOTE:** Two additional screw terminals ('GND' & 'KEY SWI') allow an external key-switch (or contact-closure) to 'lock-out' control of Channel Select and/or Main Level functions from the Controller. These functions will then be temporarily available from the SPM412e front panel, as long as the 'lock-out' is maintained. When 'lock-out' is released, the Controller memory will then reassert its previous settings on the SPM412e. A 4-gang DIP switch on the Controller circuit board allows custom functions to be assigned, such as Channel Select 'lock-out', Main Level 'lock-out', key-lock triggering, and infrared detector defeat (instructions included with Controller).



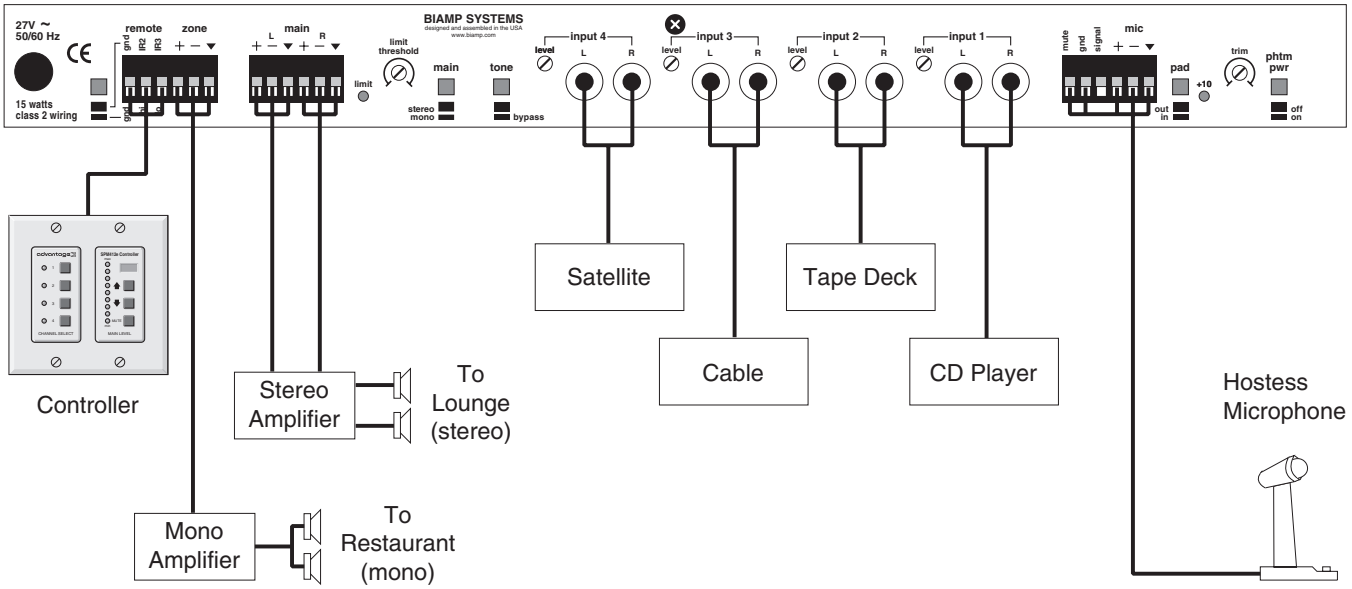
Translator: When the adjacent switch is depressed, the 'hi', 'lo', & 'gnd' terminals on the SPM412e rear panel Remote connector provide a 'Translator' input, which allows third-party controllers (such as AMX®, CRESTRON®, and RANGER™) to directly interface to, and control, the SPM412e. To interface a third-party controller to the Translator input, connect the controller output to either the 'hi' or 'lo' terminal on the SPM412e (depending upon high or low idle signal from the controller) and the controller ground to the SPM412e 'gnd' terminal. For reliable operation it is recommended that the SPM412e be located within 10 feet of the third-party controller. The Translator input is compatible with bi-polar signal voltages (such as -12V to +12V RS-232 signal levels) as well as uni-polar signal voltages (such as 0V to +5V TTL or CMOS logic signals). The maximum input voltage range for the Translator input is -15 Volts DC to +15 Volts DC, The switching threshold for the Translator input is approximately +2 Volts DC (at idle-high terminal) or +3 Volts DC (at idle-low terminal). Input impedance for the Translator signal is about 6k ohms. The third-party controller must be programmed to output a 'carrier-stripped' bit-stream in the Biamp format (contact the controller manufacturer to determine if their device driver library supports the Biamp format).

AMX is a registered trademark of AMX Corporation.
CRESTRON is a registered trademark of CRESTRON Electronics, Inc.
RANGER is a registered trademark of Rauland-Borg Corp.

APPLICATIONS

Restaurant/Lounge

SPM412e



1) Un-assign Mic/Line Input signal and muting from the Zone Output (restaurant). See Modifications on pg. 4. This allows 'paging' to occur only in the Main Output (lounge).

2) Connect Zone Output to the input of the amplifier driving the restaurant speakers.

3) Connect Main Output to the inputs of the amplifier driving the lounge speakers.

4) Connect the 'paging' microphone to the Mic/Line Input, with the push-to-talk switch wired across the 'Mute' & 'Gnd' terminals. This allows switch-activated 'page-over' muting.

5) Connect the stereo line-level program sources to Inputs 1~4.

6) Adjust Level 1~4 (reduce level only on inputs which are higher than the others).

7) Adjust Main Level, Zone Level, and Limit Threshold for desired maximum levels.

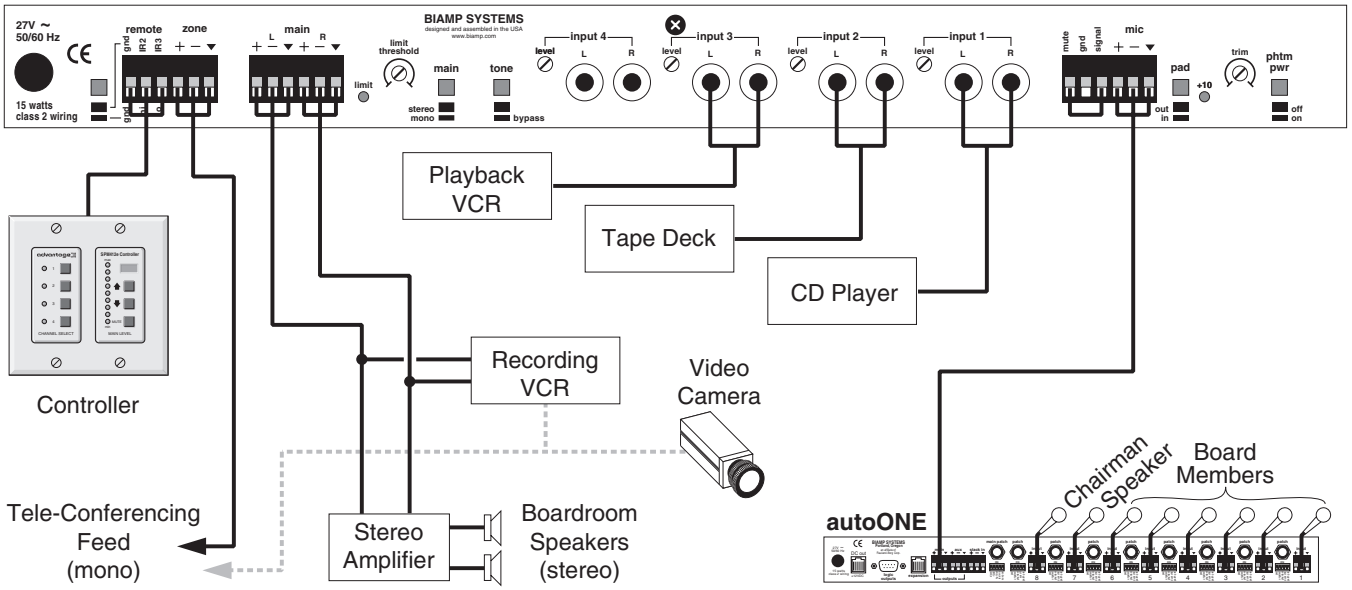
8) Set Trim & Pad (+10 LED flash only on peaks). Adjust Mic Level for desired paging level.

9) Connect an optional Controller to the Remote terminals. Mount the Controller in a location to accept push-button and/or infrared commands.

APPLICATIONS

Boardroom

SPM412e



1) Connect Zone Output to the input of a teleconferencing system. This allows interactive meetings, training seminars, and presentations to be fed to remote locations.

2) Connect Main Output to the inputs of the amplifier driving the boardroom speakers. A separate tap from Main Output can be used to feed the audio inputs of a VCR, when recording training seminars or presentations for future viewing. A distribution amplifier, such as a BIAMP DA28R, may be desired for multiple isolated feeds.

3) Connect an automatic or mic/line mixer, such as a BIAMP autoONE or 801 to the Mic/Line Input. Connect a wire across the 'Mute' & 'Signal Present' terminals for voice-activated muting.

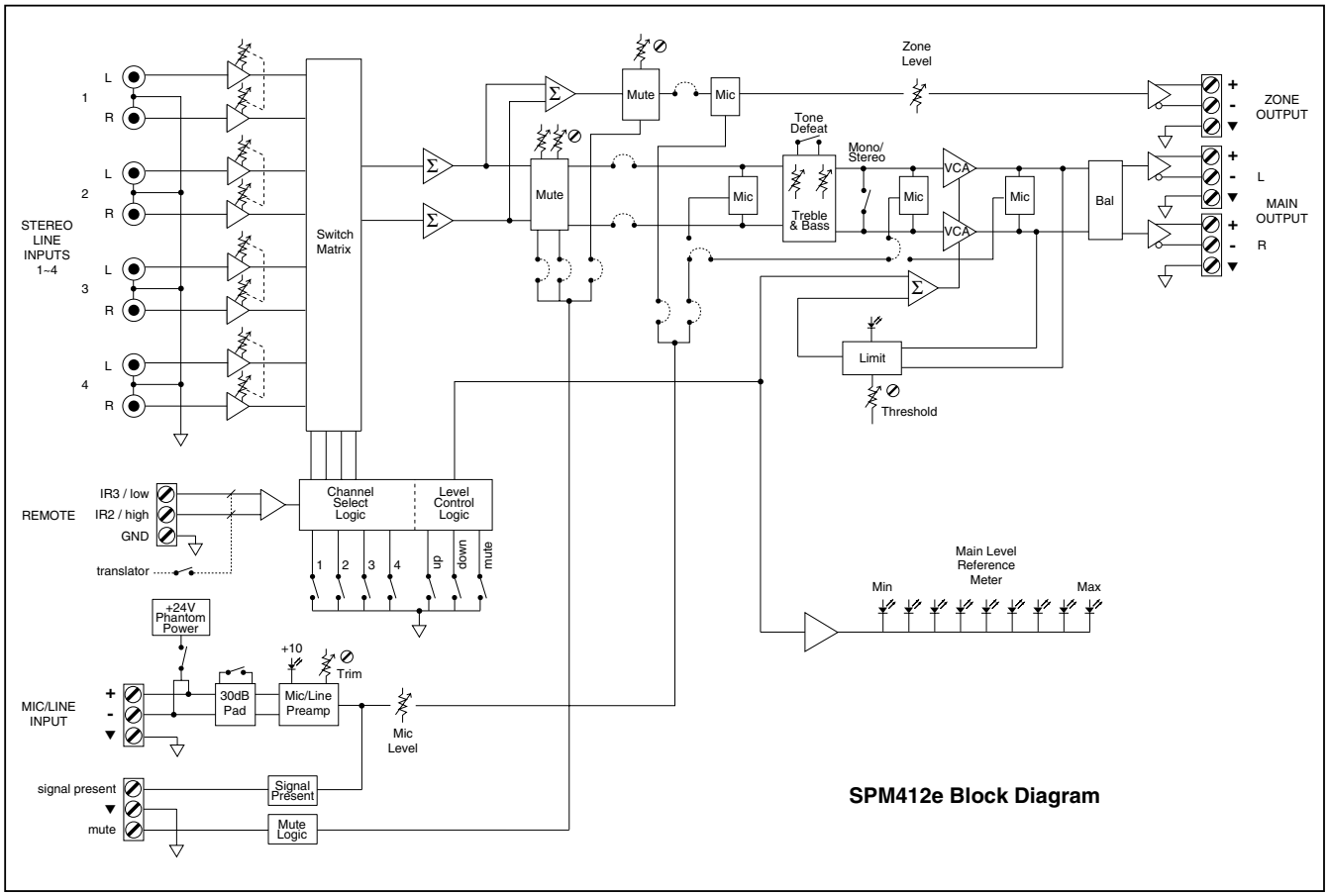
4) Connect the stereo line-level program sources to Inputs 1~4, and adjust Level 1~4 (reduce level only on inputs which are higher than the others).

5) Adjust Main Level, Zone Level, and Limit Threshold for desired maximum levels.

6) Set microphone mixer output level. Set Trim & Pad so the +10 indicator flashes only on occasional peaks. Adjust Mic Level for desired overall microphone levels.

7) Connect an optional Controller to the Remote terminals. Mount the Controller in a location to accept push-button and/or infrared commands.

BLOCK DIAGRAM



SPM412e Block Diagram

SPECIFICATIONS

Frequency Response (20Hz-20kHz @ +4dBu)**:**	+0/-0.5dB
Total Harmonic Distortion (20Hz-20kHz @ +4dBu)**:**	< 0.1%
Output Noise (20Hz-20kHz @ nominal levels)**:**	< -85dBu
Equivalent Input Noise (20Hz-20kHz, 150Ω termination @ Mic/Line Input)**:**	< -125dBu
Maximum Gain (Mic/Line Input to Main Output)**:**	80dB
Input Trim Gain Range:	
Mic/Line Input (30dB Pad out)	+60dB to +20dB
Stereo Line Inputs 1~4	+10dB to -50dB
Input Impedance:	
Mic/Line Input (balanced)	1.7k ohms
Stereo Line Inputs 1~4 (unbalanced)	7k ohms
Maximum Input:	
Mic/Line Input (balanced)	+27dBu
Stereo Line Inputs 1~4 (unbalanced)	+27dBu
Output Impedance:	
Main Output (balanced)	200 ohms
Zone Output (balanced)	200 ohms
Maximum Output:	
Main Output (balanced)	+24dBu
Zone Output (balanced)	+24dBu
Phantom Power (Mic/Line Input only)**:**	+24 Volts DC
Power Consumption:	10 Watts max.
Power Requirements:	115/230VAC 50/60Hz
Dimensions:	
Height (1 rack space)	1.75 inches (44mm)
Width	19 inches (483mm)
Depth	7.25 inches (178mm)
Weight:	6 lbs. (2.72kg)

WARRANTY

BIAMP SYSTEMS IS PLEASED TO EXTEND THE FOLLOWING 5-YEAR LIMITED WARRANTY TO THE ORIGINAL PURCHASER OF THE PROFESSIONAL SOUND EQUIPMENT DESCRIBED IN THIS MANUAL

1. BIAMP Systems warrants to the original purchaser of new products that the product will be free from defects in material and workmanship for a period of 5 YEARS from the date of purchase from an authorized BIAMP Systems dealer, subject to the terms and conditions set forth below.

2. If you notify BIAMP during the warranty period that a BIAMP Systems product fails to comply with the warranty, BIAMP Systems will repair or replace, at BIAMP Systems' option, the nonconforming product. As a condition to receiving the benefits of this warranty, you must provide BIAMP Systems with documentation that establishes that you were the original purchaser of the products. Such evidence may consist of your sales receipt from an authorized BIAMP Systems dealer. Transportation and insurance charges to and from the BIAMP Systems factory for warranty service shall be your responsibility.

3. This warranty will be VOID if the serial number has been removed or defaced; or if the product has been altered, subjected to damage, abuse or rental usage, repaired by any person not authorized by BIAMP Systems to make repairs; or installed in any manner that does not comply with BIAMP Systems' recommendations.

4. Electro-mechanical fans, electrolytic capacitors, and normal wear and tear of items such as paint, knobs, handles, and covers are not covered under this warranty.

5. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. BIAMP SYSTEMS DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

6. The remedies set forth herein shall be the purchaser's sole and exclusive remedies with respect to any defective product.

7. No agent, employee, distributor or dealer of Biamp Systems is authorized to modify this warranty or to make additional warranties on behalf of Biamp Systems. statements, representations or warranties made by any dealer do not constitute warranties by Biamp Systems. Biamp Systems shall not be responsible or liable for any statement, representation or warranty made by any dealer or other person.

8. No action for breach of this warranty may be commenced more than one year after the expiration of this warranty.

9. BIAMP SYSTEMS SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING LOST PROFITS OR LOSS OF USE ARISING OUT OF THE PURCHASE, SALE, OR USE OF THE PRODUCTS, EVEN IF BIAMP SYSTEMS WAS ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Biamp Systems
10074 S.W. Arctic Drive
Beaverton, Oregon 97005
(503) 641-7287

BIAMP
SYSTEMS
10074 S.W. Arctic Drive • Beaverton, Oregon 97005 USA
tel 800.826.1457 • 503.641.7287 • *fax* 503.626.0281 • www.biamp.com

CE

EC Declaration of Conformity

Biamp Systems Corporation, as manufacturer having sole responsibility, hereby declares that our delivered version of the following described product complies with the applicable provisions of the DIRECTIVES except as noted herein. In case of any alterations to the product not agreed upon and directed by Biamp Systems Corporation, this declaration is no longer valid.

Product Models: SPM412e

Product Description: Audio Sterio Preamplifier-Mixer

Applicable EC Directives:	Applicable Harmonized Standards:	
LVD Directive (2006/95/EC)	Safety,	EN 60065:2001, Seventh Edition
EMC Directive (2004/108/EC)	Emissions,	EN 55103-1:1996, Environment E2
	Immunity,	EN 55103-2:1996

Special Considerations for Product Environment or Compliance:

- Use only Biamp Systems supplied 27 VAC power adaptor.
- Shielded cabling must be used for system connections.
- RF interference conducted through interconnecting cabling or connectors may cause varying degrees of random signal degradation. The effect of increased noise or distortion due to this interference is typically masked by the desired signal. In no instance is operation inhibited.

Technical Documentation File Location and Contact:

Biamp Systems, Inc.
10074 S.W. Arctic Drive
Beaverton, OR USA 97005

phone: (503) 641-7287
fax: (503) 626-0281
e-mail: biamp@biamp.com

Authorized Representative:

Larry Copley, Compliance Engineer

Authorized Signature: Larry Copley

Issued: July, 2007

SAFETY INFORMATION

The words WARNING and CAUTION throughout the manual, and on the device, call attention to important safety information. These words have the following meanings.

WARNING: The related information alerts you to conditions that could result in serious injury or damage to property if the instructions are not followed properly.

CAUTION: The related information instructs you on how to prevent damage to the equipment or how to avoid conditions that could result in minor injury if proper steps are not followed.

Product labelling and the operation manual may use the internationally recognized symbols defined below to note safety messages.

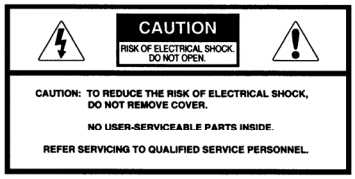
The lightning flash with arrowhead symbol, enclosed within a triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the apparatus's enclosure or at connection terminals that may be of sufficient magnitude to constitute a risk of electrical shock.

The exclamation point, enclosed within a triangle, is intended to alert the user to important installation, operation, and maintenance (servicing) instructions in the literature accompanying the apparatus.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRICAL SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.

CAUTION: Installation of this apparatus should be made by a qualified installation person and should conform to all applicable local codes.

Modification and optional equipment information referenced in this manual is for use by qualified installation and service personnel only.


CAUTION
RISK OF ELECTRICAL SHOCK, DO NOT OPEN.
CAUTION: TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER.
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

"INFORMACIÓN DE SEGURIDAD"

Las palabras **PELIGRO** (WARNING) y **PRECAUCIÓN** (CAUTION) a lo largo del manual y en el dispositivo (sistema), llaman la atención acerca de una importante información de seguridad. Estas palabras tienen los siguientes significados :

PELIGRO (WARNING) : la información relata las condiciones en que podría ser dañada seriamente la propiedad si no se siguen adecuadamente las instrucciones.

PRECAUCIÓN (CAUTION) : la información que se relata te instruye en cómo prevenir daños al equipo o como evitar condiciones que podrían resultar en perjuicio menor si los pasos adecuados no son seguidos correctamente.

El etiquetado del producto y el manual de operación pueden hacer uso de los símbolos reconocidos internacionalmente y cuyos mensajes estan definidos a continuación para modificar mensajes de seguridad:

El símbolo del rayo encerrado en un triángulo pretende alertar al usuario de la presencia de un peligroso voltaje no aislado ,dentro de la caja del aparato o a un terminal de conexión y que podría ser de suficiente magnitud como para constituir un grave riesgo de descarga eléctrica.

El punto de exclamación dentro de un triángulo pretende alertar al usuario de la importancia de las instrucciones de instalación, operación y mantenimiento (servicio) que acompañan al aparato.

PELIGRO (WARNING) : para reducir el riesgo de fuego o una descarga electrica, no exponer este aparato a la lluvia o la humedad.

PRECAUCIÓN (CAUTION) : la instalación de este aparato debería hacerse por una persona cualificada en la instalación, y debería conformar todos los códigos locales aplicables.

La modificación y la información opcional del equipo referenciada en este manual es para ser utilizada únicamente por personal cualificado en instalación y servicio.

PRECAUCIÓN
RIESGO DE DESCARGA ELÉCTRICA NO ABRIR.
PRECAUCIÓN: para reducir el riesgo de descarga eléctrica no levantar la tapa.
NO EXISTEN COMPONENTES DE SERVICIO EN EL INTERIOR.
REFERIRSE ÚNICAMENTE A PERSONAL CUALIFICADO PARA SERVICIO TECNICO.

INFORMATION CONCERNANT VOTRE SECURITE

Les mots **WARNING** et **CAUTION** dans le manuel d'utilisation et sur les appareils attirent votre attention sur les plus importantes informations concernant votre sécurité. Ces mots ont la signification suivante:

WARNING: Ce mot vous indique les circonstances dans lesquelles vous pourriez être blessé ou endommager votre équipement si les instructions ne sont pas suivies correctement.

CAUTION: Ce mot vous indique comment éviter d'endommager votre matériel et comment éviter de vous blesser si vous ne suivez pas les instructions.

Vous trouverez peut-être les symboles suivants sur votre appareil ou dans le manuel d'utilisation.

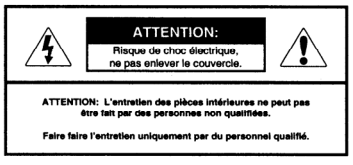
L'éclair se terminant en flèche dans un triangle permet de prévenir l'utilisateur d'un voltage dangereux non isolé dans l'appareil ou d'une connexion d'une amplitude suffisante pour constituer un risque de choc électrique.

Le point d'exclamation dans un triangle permet de prévenir l'utilisateur des points importants concernant l'installation, le fonctionnement et l'entretien de l'appareil figurant dans le manuel d'utulisation.

WARNING: POUR REDUIRE LES RISQUES DE FEU OU DE CHOC ELECTRIQUE, NE PAS METTRE L'APPAREIL SOUS LA PLUIE OU DANS L'HUMIDITE.

CAUTION: L'installation de cet appareil doit être faite par un installateur qualifié et doit être en conformité avec toutes les lois locales en application.

Les informations concernant une modification ou un équipement en option dans le manuel doivent être effectué par du personnel qualifié.


ATTENTION:
Risque de choc électrique, ne pas enlever le couvercle.
ATTENTION: L'entretien des pièces intérieures ne peut pas être fait par des personnes non qualifiées.
Faire faire l'entretien uniquement par du personnel qualifié.

INFORMAZIONI PER LA SICUREZZA

Le parole **AVVERTENZA** (WARNING) e **PRUDENZA** (CAUTION) poste sul manuale d'uso e sul apparato richiamano la vostra attenzione su delle importanti informazioni per la vostra sicurezza. Queste parole hanno il seguente significato.

AVVERTENZA: (WARNING) La suddetta indicazione vi avvisa sul rischio di incorrere in danni a cose o a persone ,se le procedure d'uso e installazione non saranno seguite propriamente.

PRUDENZA: (CAUTION) La suddetta indicazione vi instruisce su come prevenire e ridurre al minimo, il rischio di danni agli apparati e alle persone se le instruzioni saranno seguite propriamente.

Le apparecchiature e i manuali di instruzioni riporteranno la simbologia standard raffigurata qui sotto ,accompagnate dalle relative informazioni per la sicurezza.

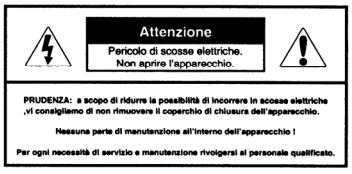
La simbologia con il fulmine all'interno di un triangolo, intende avvisare l'utente della presenza di alto volaggio all'interno del apparecchio in questione, e che il suddetto apparecchio si alimenta attraverso una tensione di rete ad alto voltaggio e che dunque si potrebbe incorrere sul rischio di una possibile scossa elettrica.

La simbologia con il punto esclamativo all'interno di un triangolo, intende avvisare l'utente di una serie di instruzioni contenute nel manuale d'uso riguardanti : operato,manutenzione e assistenza. Il suddetto manuale sarà a corredo dell'apparecchio.

AVVERTENZA: (WARNING) PER RIDURRE IL RISCHIO DI POSSIBILI INCENDI O SCOSSE ELECTTRICHE ,SCONSIGLIAMO DI ESPORRE L'APPARECCHIO ALLA PIOGGIA O ALL'UMIDITA'.

PRUDENZA: (CAUTION) l'Installazione di questo apparato dovrà essere effettuata solo da personale qualificato e il tipo di installazione dovrà essere in regola con le norme vigenti locali..

Modifiche e ulteriori informazioni specificate in questo manuale sono solamente riservate al personale qualificato all'installazione.


Attenzione
Pericolo di scosse elettriche. Non aprire l'apparecchio.
PRUDENZA: a scopo di ridurre la possibilità di incorrere in scosse elettriche ,vi consigliamo di non rimuovere il coperchio di chiusura dell'apparecchio.
Nessuna parte di manutenzione all'interno dell'apparecchio !
Per ogni necessità di servizio e manutenzione rivolgersi al personale qualificato.

Sicherheitshinweise

Die Bergriffe **WARNUNG** (engl. WARNING) und **ACHTUNG** (engl. CAUTION) in der Bedienungsanleitung und auf den Geräten machen auf wichtige Sicherheitsinformationen aufmerksam. Diese Begriffe haben die folgende Bedeutung:

WARNUNG: (WARNING) Der folgende Text warnt Sie vor ernsthaften Verletzungen oder Beschädigungen, die aus einer fehlerhaften Bedienung bzw. Handhabung des Gerätes resultieren können.

ACHTUNG: (CAUTION) Der folgende Text informiert Sie über Bedienungshinweise zum Schutz Ihres Gerätes oder weist auf mögliche Schäden hin, wenn die Bedienungshinweise nicht beachtet werden.

Die Beschriftung der Geräte und die Bedienungsanleitungen weisen unter Umständen international bekannte Symbole auf, die die folgende Bedeutung haben:

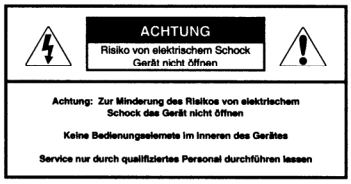
Das Blitzsymbol im Dreieck warnt vor anliegender, nicht isolierter „gefährlicher Spannung" im Inneren oder an den Anschlüssen des Gerätes. Die Berührung der unter Spannung stehenden Teile kann zu einem elektrischen Schock führen.

Das Rufzeichen im Dreieck macht auf wichtige Installations-, Bedienungs- und Servicehinweise in der zugehörigen Bedienungsanleitung aufmerksam.

WARNUNG: (WARNING) Zur Minderung des Risikos von Feuer und elektrischem Schock schützen Sie das Gerät vor Regen und Feuchtigkeit.

ACHTUNG: (CAUTION) Die Installation des Gerätes sollte nur durch qualifiziertes Personal durchgeführt werden und muß den jeweiligen Bestimmungen entsprechen.

Die Modifikationen und die Informationen zu den optionalen Erweiterungen in der Bedienungsanleitung sind nur für qualifiziertes Personal bestimmt.


ACHTUNG
Risiko von elektrischem Schock
Gerät nicht öffnen
Achtung: Zur Minderung des Risikos von elektrischem Schock das Gerät nicht öffnen
Keine Bedienungselemete im Inneren des Gerätes
Service nur durch qualifiziertes Personal durchführen lassen

Sikkerhedsinformation

Ordene ***ADVARSEL*** (WARNING) og ***FORSIGTIG*** (CAUTION), brugt i henholdsvis brugervejledning og på selve produktet, indikerer, at vigtig information omkring sikkerhed følger. Ordene betyder følgende:

ADVARSEL: (WARNING) Den efterfølgende information advarer Dem om forhold, der kan føre til alvorlige ulykker og ejendomsskader, hvis ikke vejledningen følges.

FORSIGTIG: (CAUTION) Den efterfølgende information vejleder Dem i, hvordan De undgår skade på produktet, samt undgår forhold der kan føre til mindre ulykker og ejendomsskader, hvis ikke vejledningen følges.

Produktetiketter og brugervejledning kan indeholde de internationalt anerkendte symboler der er vist nedenfor:

Trekanten med et lyn i midten har til hensigt at advare brugeren om, at produktet indeholder "farlig spænding", og at det derfor er forbundet med fare for elektrisk stød at åbne produktet.

Trekanten med udråbstegn har til hensigt at advare brugeren om, at vigtig information omkring installation, brug, service og vedligeholdelse af produktet er indeholdt i den medfølgende brugervejledning.

ADVARSEL: (WARNING) Med henblik på at reducere risikoen for brand eller elektrisk stød, må produktet ikke udsættes for regn eller fugt.

FORSIGTIG: (CAUTION) Installation af dette produkt skal foretages af en autoriseret installatør og skal være i overensstemmelse med alle anvendelige lokale retningslinier.

Modifikationer samt alternativt udstyr beskrevet i denne brugervejledning er kun henvendt til kvalificerede installatører og servicepersonale.

FORSIGTIG
Fare for elektrisk stød
- må ikke åbnes.
FORSIGTIG: Med henblik på at reducere risikoen for elektrisk stød, må svøbet ikke fjernes.
Indeholder ingen komponenter relevante for brugeren.
Anvend autoriseret servicepersonale ved alle servicetiltag.

VEILIGHEIDSINFORMATIE

De woorden **WAARSCHUWING** (WARNING) en **VOORZICHTIG** (CAUTION) welke in de handleiding en op het apparaat voorkomen, waarschuwen U voor belangrijke veiligheidsinformatie. Zij hebben de volgende betekenis:

WAARSCHUWING: (WARNING) De betreffende informatie waarschuwt U voor omstandigheden die kunnen leiden tot defecten of beschadigingen aan apparaten als de instructies niet volledig worden opgevolgd.

VOORZICHTIG: (CAUTION) De betreffende informatie instrueert U hoe U defecten aan apparatuur kunt voorkomen of hoe U omstandigheden kunt vermijden die kunnen resulteren in schade als de juiste stappen niet worden opgevolgd.

Produkt informatie en handleiding hanteren onderstaande internationaal erkende symbolen om veiligheidsinstructies aan te geven.

De bliksemschicht in een driehoek wordt gebruikt om de gebruiker te attenderen op ongeïsoleerde "gevaarlijke spanning" in het apparaat of bij de aansluitklemmen, die het risico van een electrische schok kunnen geven.

Het uitroepteken in een driehoek wordt gebruikt om de gebruiker te attenderen op belangrijke installatie, gebruiks- en onderhoudsinstructies in de beschrijving die bij het apparaat hoort.

WAARSCHUWING: (WARNING) OM HET RISICO VAN BRAND OF EEN ELECTRISCHE SCHOK TE VERMIJDEN DIENT U HET APPARAAT NIET AAN VOCHT BLOOT TE STELLEN.

VOORZICHTIG: (CAUTION) Installatie van dit apparaat dient te geschieden door gekwalificeerd personeel en dient te geschieden conform de plaatselijke voorschriften.

Modificaties en aanvullende informatie waar in de handleiding naar wordt verwezen, dient alleen voor gebruik door gekwalificeerd personeel.

VOORZICHTIG.
Risico van electrische schok.
Niet openen.
Waarschuwing: Om het risico van een electrische schok te verminderen het apparaat niet openen.
Er zijn geen, door gebruiker, vervangbare onderdelen in dit apparaat.
Service overlaten aan gekwalificeerd service personeel.

TURVALLISUUSTIEDOTE

Sanat **VAROITUS** (WARNING) ja **HUOMIO** (CAUTION), jotka esiintyvät manuaalissa ja itse laitteessa, ilmoittavat tärkeästä turvallisuusinformaatiosta. Näillä sanoilla on seuraava merkitys:

VAROITUS: (WARNING) Yhteydessä oleva informaatio varoittaa olosuhteista, jotka saattavat johtaa vakaviin vammoihin tai laitteen vaurioitumiseen, mikäli ohjeita ei täysin noudateta.

HUOMIO: (CAUTION) Yhteydessä oleva informaatio neuvoo, miten laitteen vaurioituminen voidaan ehkäistä tai miten voidaan välttää olosuhteet, jotka voivat johtaa lieviin vammoihin, mikäli ohjeita ei noudateta.

Tuotteessa tai käyttöohjeessa voidaan käyttää seuraavia alla määriteltyjä kansainvälisiä symboleja, jotka viittaavat turvallisuusinformaatioon.

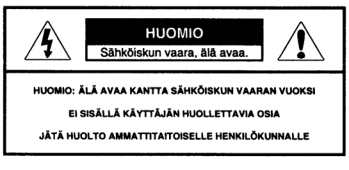
Kolmion sisällä olevan nuolipäinen salama varoittaa käyttäjää laitteen sisällä tai liitännöissä olevasta eristämättömästä vaarallisesta jännitteestä, joka saattaa olla tarpeeksi suuri aiheuttaakseen sähköiskun vaaran.

Kolmion sisällä oleva huutomerkin tarkoituksena on ilmoittaa käyttäjälle tärkeistä asennusta, käyttöä tai huoltoa koskevista ohjeista laitteen mukana seuraavassa kirjallisuudessa.

VAROITUS: (WARNING) ÄLÄ ALTISTA LAITETTA SATEELLE TAI KOSTEUDELLE TULIPALON JA SÄHKÖISKUN VAARAN VUOKSI.

HUOMIO: (CAUTION) Laitteen asentaminen tulisi jättää ammattitaitoisen henkilön suoritettavaksi ja asennuksessa tulee noudattaa kaikkia paikallisia säännöksiä.

Tässä manuaalissa oleva informaatio, joka koskee muutostöitä ja lisälaitteita, on tarkoitettu vain ammattitaitoisten asennus- ja huoltohenkilöiden käyttöön.


HUOMIO
Sähköiskun vaara, älä avaa.
HUOMIO: ÄLÄ AVAA KANTTA SÄHKÖISKUN VAARAN VUOKSI
EI SISÄLLÄ KÄYTTÄJÄN HUOLLETTAVIA OSIA
JÄTÄ HUOLTO AMMATTITAITOISELLE HENKILÖKUNNALLE

SIKKERHETS INFORMASJON

Når ordene **ADVARSEL** (WARNING) og **VIKTIG** (CAUTION) blir brukt i manualen og på produktet, gjelder det informasjon som har med brukerens sikkerhet å gjøre. Ordene har følgende mening:

ADVARSEL: (WARNING) Tilhørende informasjon viser til forhold som kan resultere i alvorlige skader eller ødeleggelser hvis anvisningene ikke følges nøye.

VIKTIG: (CAUTION) Tilhørende informasjon forteller deg hvordan du skal unngå feil på utstyret, eller unngå situasjoner som kan resultere i mindre skader.

Produkt merkingen og bruksanvisningen bruker internasjonale symboler for å merke punkter som er viktige for brukerens sikkerhet.

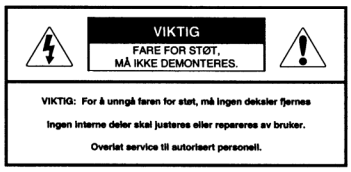
Lynet i en triangel advarer brukeren om uisolert "farlig spenning" inne i apparatet, eller tilkoblings terminaler som kan gi støt.

Etter utropstegnet i en triangel følger informasjon som er viktig når det gjelder installasjon, bruk og vedlikehold (service) av apparatet.

ADVARSEL: (WARNING) FOR Å REDUSERE FAREN FOR BRANN ELLER STØT MÅ APPARATET IKKE UTSETTES FOR VANN ELLER FUKTIGHET.

VIKTIG: (CAUTION) Installasjon av apparatet skal foretas av autorisert installatør etter gjeldende forskrifter.

Modifikasjoner og tilleggs informasjon som følger er kun for kvalifiserte installatører eller service personell.


VIKTIG
FARE FOR STØT,
MÅ IKKE DEMONTERES.
VIKTIG: For å unngå faren for støt, må ingen deksler fjernes
Ingen interne deler skal justeres eller repareres av bruker.
Overlat service til autorisert personell.

SÄKERHETS INFORMATION

Orden **VARNING** (WARNING) och **OBSERVERA** (CAUTION) vilka används i denna manual och på apparaten, är menade att uppmärksamma viktig säkerhets information. Dessa ord har följande betydelse.

VARNING: (WARNING) Information som uppmärksammar på omständigheter som kan resultera i allvarlig personskada eller skada på egendom om instruktionerna ej följs.

OBSERVERA: (CAUTION) Information som uppmärksammar på instruktioner om hur skada på utrustning eller hur situationer där lättare personskador kan uppstå undvikes.

Följande internationellt använda ord och symboler används i handboken och på märkningar på produkten för att uppmärksamma användare på viktiga säkerhets instruktioner.

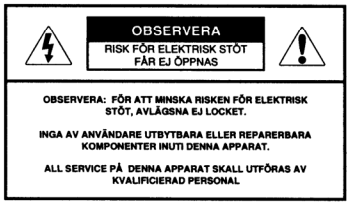
En blixt med pil, innesluten i en triangel, menad att uppmärksamma användare på närvaron av oisolerade "farliga spänningar" i apparaten eller på anslutnings kontakter vilka har tillräcklig styrka för att medföra risk för elektrisk söt.

Ett utropstecken, innesluten i en triangel, menad att uppmärksamma användare på viktiga installations, handhavande eller underhålls-instruktioner i medföljande dokumentation.

VARNING: (WARNING) FÖR ATT MINSKA RISKEN FÖR BRAND ELLER ELEKTRISK STÖT, UTSÄTT EJ APPARATEN FÖR FUKT ELLER VÄTSKA.

OBSERVERA: (CAUTION) Installation av denna apparat skall utföras av kvalificerad installatör samt enligt alla gällande lokala bestämmelser.

Eventuella modifierings instruktioner och annan information av teknisk art i denna manual är endast avsedd att användas av kvalificierad installations och service personal.


OBSERVERA
RISK FÖR ELEKTRISK STÖT
FÅR EJ ÖPPNAS
OBSERVERA: FÖR ATT MINSKA RISKEN FÖR ELEKTRISK STÖT, AVLÄGSNA EJ LOCKET.
INGA AV ANVÄNDARE UTBYTBARA ELLER REPARERBARA KOMPONENTER INUTI DENNA APPARAT.
ALL SERVICE PÅ DENNA APPARAT SKALL UTFÖRAS AV KVALIFICIERAD PERSONAL

ΠΛΗΡΟΦΟΡΙΕΣ ΑΣΦΑΛΕΙΑΣ

Οι λέξεις **ΚΙΝΔΥΝΟΣ** (WARNING) και **ΠΡΟΣΟΧΗ** (CAUTION) που αναφέρονται μέσα στο εγχειρίδιο και στη συσκευή, επικεντρώνουν την προσοχή σε σημαντικές πληροφορίες ασφαλείας. Οι λέξεις αυτές έχουν την παρακάτω σημασία.

ΚΙΝΔΥΝΟΣ : (WARNING) Η αναγραφόμενη πληροφορία επιστά την προσοχή σας σε καταστάσεις που θα μπορούσαν να έχουν σαν αποτέλεσμα σοβαρό τραυματισμό ή καταστροφή της ιδιοκτησίας αν οι οδηγίες δεν ακολουθηθούν κατάλληλα.

ΠΡΟΣΟΧΗ : (CAUTION) Η αναγραφόμενη πληροφορία σας καθοδηγεί πώς να προλάβετε καταστροφή του εξοπλισμού ή πώς να αποφύγετε καταστάσεις που θα μπορούσαν να έχουν ως αποτέλεσμα μικροτραυματισμούς αν δεν ακολουθηθούν τα σωστά βήματα.

Στις επιγραφές των προτόντων και στο εγχειρίδιο λειτουργίας, χρησιμοποιούνται τα σιεθνώς αναγνωρισμένα σύμβολα, των οποίων ο ορισμός δίνεται παρακάτω έτσι ώστε να υπογραμμιστούν τα μηνύματα ασφαλείας.

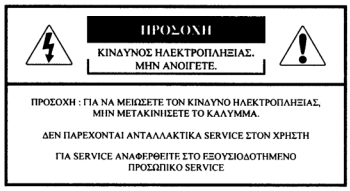
Η φωτενή αναλαμπή με σύμβολο το βέλος, μέσα στο τρίγωνο, έχει σκοπό να επιστήσει την προσοχή του χρήστη, στην ύπαρξη μη- μονωμένης « επικίνδυνης ισχύος ρεύματος » στο εσωτερικό της συσκευής ή στις άκρες σύνδεσης οι οποίες μπορεί να έχουν αρκετό μέγεθος ώστε να περιέχουν κίνδυνο ηλεκτροπληξίας.

Το επεξηγηματικό σημείο, μέσα στο τρίγωνο, έχει σκοπό να επιστήσει την προσοχή του χρήστη στις σημαντικές οδηγίες εγκατάστασης, λειτουργιας και συντήρησης (service) που περιέχονται στα φυλλάδια που συνοδεύουν την συακευή.

ΚΙΝΔΥΝΟΣ : (WARNING) Για να αποφύγετε τον κίνδυνο φωτιάς ή ηλεκτροπληξίας, μην εκθέτετε αυτή τη αυσκευή σε βροχή ή σε υγρασία.

ΠΡΟΣΟΧΗ : (CAUTION) Η εγκατάσταση αυτής της συσκευής θα πρέπει να γίνει από εξειδικευμένο άτομο και θα πρέπει να προσαρμόζεται σε όλους τους εφαρμόσιμους τοπικούς κώδικες.

Οι τροποποιήσεις και οι προϋποθετικές πληροφορίες για τον εξοπλισμό, που αναφέρονται σε αυτό το εγχειρίδιο, προορίζονται για χρήση μόνο από εξειδικευμένα στην εγκατάσταση και στο service, άτομα.



INFORMAÇÃO SOBRE SEGURANÇA

As palavras ADVERTÊNCIA (WARNING) e PRECAUÇÃO (CAUTION) neste manual, e no dispositivo, alertam para importantes informações sobre segurança. Estas palavras significam o seguinte:

ADVERTÊNCIA : (WARNING) Informação relacionada que alerta sobre condições que poderão resultar em lesões sérias ou prejuízo, se as instruções não forem seguidas adequadamente.

PRECAUÇÃO : (CAUTION) Informação relacionada que instrúi como prevenir danos no equipamento ou como evitar condições que poderão resultar em lesões leves, se os passos não forem seguidos adequadamente.

As etiquetas do produto e do manual de operações podem usar os símbolos internacionalmente reconhecidos definidos abaixo para advertir mensagens de segurança.

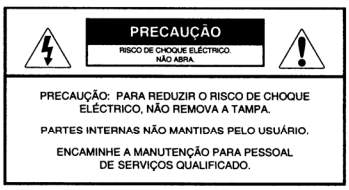
símbolo do relâmpago com uma seta, dentro de um triângulo, tem o fim de alertar o usuário a presença de "voltagem perigosa" sem isolação dentro da caixa isolamento do aparelho ou nos terminais de ligação que podem ter a magnitude suficiente que constitui um risco de choque eléctrico.

ponto de exclamação, dentro de um triângulo, tem o fim de alertar o usuário sobre instruções importantes de instalação, operação e manutenção (serviços) na literatura que acompanha o aparelho.

ADVERTÊNCIA : (WARNING) PARA REDUZIR O RISCO DE INCÊNDIO OU CHOQUE ELÉCTRICO, NÃO EXPONHA ESTE APARELHO A CHUVA OU HUMIDADE.

PRECAUÇÃO : (CAUTION) A instalação deste aparelho deve ser feita por um profissional qualificado e deve obedecer a todos os códigos locais aplicáveis.

Modificação e informação sobre equipamento adicional citados neste manual são para o uso exclusivo do pessoal qualificado de instalação e manutenção.


PRECAUÇÃO
RISCO DE CHOQUE ELÉCTRICO.
NÃO ABRA.
PRECAUÇÃO: PARA REDUZIR O RISCO DE CHOQUE ELÉCTRICO, NÃO REMOVA A TAMPA.
PARTES INTERNAS NÃO MANTIDAS PELO USUÁRIO.
ENCAMINHE A MANUTENÇÃO PARA PESSOAL DE SERVIÇOS QUALIFICADO.

(This information is presented to comply with the requirements of Chinese law SJ/T11363-2006)

有害物质表

Biamp 系统
SPM412e
数字信号处理器

部件名称	有毒有害物质或元素					
	Pb（铅）	Hg（汞）	Cd（镉）	Cr+6（六价铬）	PBB	PBDE
SPM412e 主机	X	O	X	O	O	O
电源变压器	X	O	X	O	O	O
可插拔 Euroblock 连接器	O	O	O	O	O	O
手册和其他书面文档	O	O	O	O	O	O
包装箱和所有包装材料	O	O	O	O	O	O

0：表示该部件所有均质材料中的这种有毒有害物质低于 SJ/T11363-2006 的限制要求

X：表示该部件中至少有一种均质材料所含的这种有毒有害物质高于 SJ/T11363-2006 的限制要求。

在电触头和（或）镀镉所含的均质材料中，镉及其化合物的含量可以超过 0.01%，但欧盟指令 91/338/EEC（根据欧盟指令 76/769/EEC）限制销售和使用某些危险物质和制剂部分中所禁止的用途除外。

在以下一种或多种物质所含的均质材料中，铅及其化合物的含量可以超过 0.1%：
1) 电子元器件中玻璃内所含的铅
2) 铅在钢材中是作为一种合金元素，含量可达 0.35%。
3) 铅在铝材中是作为一种合金元素，含量可达 0.4%。
4) 铅在铜材中是作为一种合金元素，含量可达 4%。
5) 高熔点类焊料中的铅（即铅料合金，铅含量超过 85%）。
6) 电子陶瓷部件内的铅。
7) 由两种以上元素组成的焊料中所含的铅，用于连接针脚和微处理器包装，其中铅的含量超过 80% 但低于 85%。
8) 顺应针连接系统内的铅。
9) 倒装芯片封装中半导体芯片及载体之间形成可靠连接所用焊料中的铅。

在正常使用情况下，中国环保使用期限为 10 年，条件是：

- 环境温度为 0-40C (32-104°F)
- 湿度为 0-95%，无凝结
- 海拔高度为 0-10,000 英尺
- 气流不受阻碍
- 没有水或其他液体进入任何部件
- 电源为 95-265V AC，50/60Hz
- 部件没有损坏（损坏部件应立即修理）
- 由工厂授权人员使用批准的材料进行所有维修

EU RoHS COMPLIANT

This Biamp product -- including all attendant cables and accessories supplied by Biamp -- meets all requirements of EU Directives 2002/95/EC of January 27, 2003, and 2005/618/EC of August 18, 2005, the EU RoHS Directives.An EU RoHS Materials Content Declaration document may be obtained at http://www.biamp.com